

REMARKS

Claims 1-17 and 19-40 are pending in this application. By this Amendment, Applicants amend Claim 1, 5, 12, 16, 17, 21, 22, 23, 33 and 38.

The Examiner's indication of claims 29-33 and 36 being allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph and to include all of the limitations of the base claim and any intervening claims is appreciated.

The Examiner indicated that the preliminary amendment filed on 5/25/99 was entered with exception. Applicants have further amended the specification to include the changes which were excepted from entry. Applicants respectfully request entry of these additional amendments to the specification.

The Drawings were objected to for containing the mistyped word "buwer" in Fig. 9. Applicants have amended Fig. 9 to correct the mistyped word in the accompanying Request for Approval of Drawing Corrections. Accordingly, Applicants respectfully request reconsideration and withdrawal of this objection.

Claim 1 was objected to for containing informalities. Applicants have amended claim 1 to correct the informalities. Accordingly, Applicants respectfully request reconsideration and withdrawal of this objection.

Claims 1-17 and 21-40 were rejected for containing various informalities. Applicants have amended the claims to correct the informalities. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 1, 16, 17, 19, 21, 23, 24 and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida (JP 56-119280) in view of Mori et al. (U.S. 5,644,339). Claims 2-4, 12-15 and 25-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of Mori et al. and Otsuki (JP 1-189716). Claims 5-8 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of Mori et al. and Kaneko et al. (U.S. 5,253,187). Claims 9-11, 22 and 34-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of Mori et al. and further in view of Yokoi et al. (U.S. 5,571,267). And claims 37-39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of

Mori et al. and further in view of Ishikawa et al. (U.S. 5,750,941). Applicants respectfully traverse these rejections.

Claim 1 has been amended to recite:

"An image processing device comprising image processing means for executing image processing to move an object to different positions on a display means; display means for displaying an image at an object display position based on the image processing; contact input means movably provided and brought into contact with said display means by the operation of a player, and generates a signal for computing the contact position when contacting said display means; position computing means for computing said contact position based on signals from the contact input means; and determination means for determining whether a prescribed relationship is established between said contact position and said object display position based on computed results, wherein said image processing means provides prescribed image processing for said object when the determination means determines that a prescribed relationship has been established" (Emphasis added).

Claims 5, 16, 17, 19, 20, 21 and 23 recite similar structure or method steps including image processing means for executing image processing to move an object to different positions on a display means, and contact input means to generate a signal for computing the contact position when contacting a display means.

The Examiner maintains that Yoshida "discloses an image processing device comprising image processing means for executing image processing to move an object", and concedes that Yoshida "fails to teach position computing means." The Examiner further maintains that Mori et al. teaches a position computing means, display means, contact input means, and determination means, and thus concludes, that it would have been obvious to combine the teachings of Mori et al. with Yoshida.

However, Yoshida teaches a "whacking game" including a plurality of display panels 2 and light sources 4, 4' for displaying target images on the display panels and a hammer 5 which includes photo sensors 11, 11'. The display panels 2 are nothing more than pieces of glass or plastic which have static images provided thereon, such that when the light sources 4, 4' are turned on, the static image provided on the display panel lights up. When the display panel lights up the player uses the hammer to "whack" the image, and the photo sensors in the hammer generate a signal indicating

that the target image was hit. In the "whacking game" of Yoshida, there is absolutely no movement of an object to different positions on a display means.

Therefore, contrary to the Examiner's contention that Yoshida teaches image processing means for executing image processing to move an object to different positions on a display means, Yoshida fails to teach or suggest such an image processing means. In fact, Yoshida teaches away from the claimed invention because there is absolutely no movement of the objects/images of Yoshida because the images of Yoshida are static images which are merely lit by the light source 4, 4'. Thus, Yoshida clearly fails to teach or suggest image processing means for executing image processing to move an object to different positions on a display means.

Further, assuming *arguendo* that Yoshida teaches the image processing means as the Examiner contends, as there is absolutely no movement of the images in Yoshida, there clearly would have been no motivation to combine the teachings of the electronic information apparatus of Mori et al. with the "whacking game" of Yoshida. The Examiner contends that it would have been obvious to combine the teachings of Mori et al. with Yoshida "to obtain the combined apparatus/method Yoshida-Mori et al. because it would result in accurate determination of contact coordinates." However, due to the very simple design of Yoshida including the static images which do not move to different positions on a display means, there would not have been any reason to determine the coordinates of contact coordinates in Yoshida, and thus no reason to combine features of Mori with the device of Yoshida.

Therefore, Applicants respectfully submit that Yoshida in view of Mori et al. fails to teach or suggest the inventions recited in claims 1, 5, 16, 17, 19, 20, 21 and 23.

Claim 12 recites:

"A contact input means movably provided and brought into contact with a display means by the operation of the player, comprising switch means for generating contact signals during contact; and **photoreceiver means for obtaining the brightness data of said display means**"
(Emphasis added)..

Initially, it is noted that the Examiner has failed to provide any motivation for combining the teachings of Otsuki with Yoshida and Mori et al.

Similar to the discussion above, contrary to the Examiner's contention that it would have been obvious to combine the teachings of Otsuki with Yoshida, there would have been no motivation to combine these teachings. Particularly, there is absolutely no reason for the hammer of Yoshida to obtain the brightness data of the display panels. As the images on the display panels of Yoshida are static, and the display panels have only two conditions, that is either lit or not, the brightness of the display panels of Yoshida is irrelevant to the operation of the game.

Therefore, Applicants respectfully submit that Yoshida in view of Mori et al. and Otsuki fail to teach or suggest the invention recited in claim 12, and that there would have been absolutely no motivation to combine these references as proposed by the Examiner, without providing any explanation as to what the motivation is.

In view of the foregoing Amendments to the Claims and Remarks, Applicants respectfully submit that Claim 1, 5, 12, 16, 17, 19-21 and 23, are allowable over the prior art for the reasons described above. Claims 2-4, 6-11, 13-15, 18, 22 and 24-40 are dependent upon claims 1, 5, 12, 16, 17, 19-21 and 23, and are therefore allowable for at least the reasons that claims 1, 5, 12, 16, 17, 19-21 and 23 are allowable.


In view of the foregoing Amendments and Remarks, Applicant respectfully submits that this Application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

Fig. 2 is [an oblique] a perspective view depicting the relationship in which the display means and protective glass of the image processing device are arranged relative to each other;

Fig. 8 is a block diagram depicting a schematic of the signal processing performed by the image processing device;

The main CPU 301 then waits for notification as to whether a photodetector output signal has been input from the subCPU 304 (step 703: NO[step 703: No, etc.]). In other words, in the absence of any notification that a photodetector signal from the subCPU 304 has been detected (step 703: NO), the main CPU 301 determines whether 1/60 (second) has elapsed from time t2 (step 704). When the main CPU 301 has determined that 1/60 (second) has not elapsed since time t2 (step 704: NO), it then determines whether or not there is any notification that a photodetector signal from the subCPU has been detected (step 703).

In the claims:

1. An image processing device comprising:
image processing means for executing image processing to move an object to different positions on a display means;
display means for displaying an image at an object display position based on the image processing;
contact input means [movable] movably provided and brought into contact with said display means by the operation of a player, [and generates] for generating a signal

for computing the contact position when contacting said display means;

[_____

_____]position computing means for computing said contact position based on signals from the contact input means; and

determination means for determining whether a prescribed relationship is established between said contact position and said object display position based on computed results, wherein said image processing means provides prescribed image processing for said object when the determination means determines that a prescribed relationship has been established.

5. An image processing device comprising:

image processing means for executing image processing to move an object to different positions on a display means;

display means for displaying an image at an object display position based on the image processing;

contact means [moveable] movably provided and brought into contact with said display means by the operation of a player;

input means located near said display means and generating at least one signal for computing a contact position when said contact means is brought into contact with said display means;

position computing means for computing said contact position based on the at least one signal from the input means; and

determination means for determining whether a prescribed relationship is established between said contact position and said object display position based on a computed result [where];

wherein said image processing means provides prescribed image processing of said object when the determination means determines that a prescribed relationship has been established.

12. A contact input means [moveable] movably provided and brought into

contact with a display means by the operation of the player, comprising:

switch means for generating contact signals during contact; and

photoreceiver means for obtaining the brightness data of said display means.

16. A method for processing images, comprising:

executing image processing to move an object to different positions on a display;

displaying an image based on the step of executing image processing;

providing contact [near] to a display by the operation of a player, and generating a signal for computing a contact position when the contact has been made with said display;

computing said contact position based on the signal; and

determining whether a prescribed relationship is established between said contact position and an object display position, wherein said executing step provides prescribed image processing of said object when it has been determined that a prescribed relationship has been established.

17. A method for processing images, comprising:

executing image processing to move an object to different positions on a display;

displaying an image based on the image processing;

receiving a contact input when a player provides contact [near] to a display;

generating a signal to compute a contact position when the contact has been made with said display;

computing said contact position based on the signal; and

determining whether a prescribed relationship is established between said contact position and an object display position, wherein said executing step provides prescribed image processing of said object when it has been determined that a prescribed relationship has been established.

21. An image processing system comprising:

an image processing module for performing image processing for moving an

object to different positions on a display module;

a display module for causing the display of an image based on the image processing performed by the image processing module;

a contact input module for receiving a contact input when contact occurs within a predetermined distance from the object and for generating a signal to compute a contact position when receiving the contact input; and

a determiner module for determining whether a prescribed relationship is established between the contact position and an object display position, wherein the image processing module provides prescribed image processing of the object when it has been determined that the prescribed relationship has been established.

22. The image processing system of claim 21 further including:

a point calculator module for awarding points when the prescribed relationship has been established by the determiner module.

23. An image processing device comprising:

an image processor for executing image processing to move an object to different positions on a display;

a display for displaying an image based on the image processing;

a contact unit movably provided and brought into contact with the display;

an input module for generating a [signal] position indicating signal when the contact unit is brought into contact with the display at a contact position;

a position module for computing the contact position based on the position indicating signal generated by the input module; and

a determiner module for determining whether a prescribed relationship is established between the contact position and an object display position, where said image processor provides prescribed image processing of the object when a prescribed relationship has been established.

33. The image processing device of claim [23] 31, wherein the predetermined

distance from the object display position forms a rectangular target area around the object.

38. The image [process] processing device of claim 37, wherein the input module receives [sound] signals from the sound detector when the sound detector detects and receives the resulting sound of the contact between the contact unit and the display for computing the contact position.